

# RECORD, Volume 28, No. 3\*

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Boston Annual Meeting

October 27-30, 2002

## Session 81OF

### The Changing World of Group Disability Insurance

**Track:** Health/Disability Income

**Moderator:** CHARLES H. MEINTEL

**Panelists:** WARREN M. COHEN  
MANUEL V. HIDALGO  
RICHARD J. POLLARD

*Summary: The only constant in life is change, and the group disability insurance business has experienced more than its share of dramatic changes recently. Panelists discuss a variety of recent developments in the group disability marketplace, including new risk-based capital requirements, progress toward a new experience table and the impact of war and recession. Attendees obtain up-to-date information on these important issues and learn how they are likely to affect the profitability of group disability insurance.*

**MR. CHARLES H. MEINTEL:** In terms of the changing world of disability, we have two topics to talk about today. The first topic is risk-based capital. The NAIC commissioned a task force, which came up with new formulas. Richard Pollard will take us through the development of those formulas—the history around them, what the actual changes are and what the rating agencies are doing about them. As Richard is talking, I hope people think about the implications at their own companies. Why I want you to do that will become clear in just a couple of seconds.

The second topic we'll talk about is the impact of war and terrorism. I think a more appropriate title is "Risk Management Post-9/11" because, as Warren Cohen and Manny Hidalgo will explain, there are some new tasks, if you will, that the leaders of

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your line, the disability line in particular, should go through to risk-manage your business better. There are a few more risks that we need to pay attention to now.

First up will be Richard Pollard, vice president and chief actuary from Unum Provident. Richard is in charge of all valuation functions, all of the corporate-type functions for Unum Provident's actuarial tasks. He's in charge of reinsurance and all typical corporate functions. Warren Cohen is a vice president from Reliance Standard Life in Philadelphia. Warren is in charge of pricing group life, the accident policies and disability. Finally, Manny Hidalgo is the vice president of risk management. He's in charge of most of the corporate actuarial functions for GE Financial.

My name is Chuck Meintel, and I'm the vice president and chief actuary from John Hewitt & Associates (JHA). We are a disability risk management and consulting firm in Portland, Maine.

I want to set the stage a little bit. Richard will talk about how the C-2 components—in particular, the risk-based capital for disability—will be lowered. I suggest that you think about how that is going to affect your business. For example, if you think about return on equity and if you price based on a return-on-equity-type metric, you probably will be lowering the denominator, lowering the equity component. Therefore, you would think your return on equity may be increasing, and it probably will.

On the other hand, if you price on a margin basis, for the industry last year and the year before, 75 percent of the margin came from interest on surplus and excess interest on reserves, the majority of that being interest on surplus. Many companies allocate their surpluses for the line as a function of the C-2. This topic is very important from a pricing perspective because if you price on a margin basis, you may, in fact, be allocated less investment income next year. It's important to understand that implication of this topic relative to how it impacts you. With that introduction, I'll turn it over to Richard.

**MR. RICHARD J. POLLARD:** The NAIC revised the risk-based capital C-2 factors last year, and these changes were effective December 31, 2001. I'll quickly review a little of the history of how we got to the point that the factors needed to be revised. The group disability business had a very significant reduction in the factors, and there's a good reason why that happened. We'll look at what the changes were, and we'll talk about how other rating agencies have looked at those changes. Then finally, we'll talk about the implications of the changes.

The first activity on risk-based capital (RBC) culminated in the 1991 report. This was put together fairly quickly, and for disability, especially, no models were built. Essentially, they gathered a lot of information, but most of the information was on the formulas and how other companies viewed the capital they thought they needed for their different health lines of business. The resulting formulas and factors

were pretty much based on what other companies felt their capital requirements should be for that line of business.

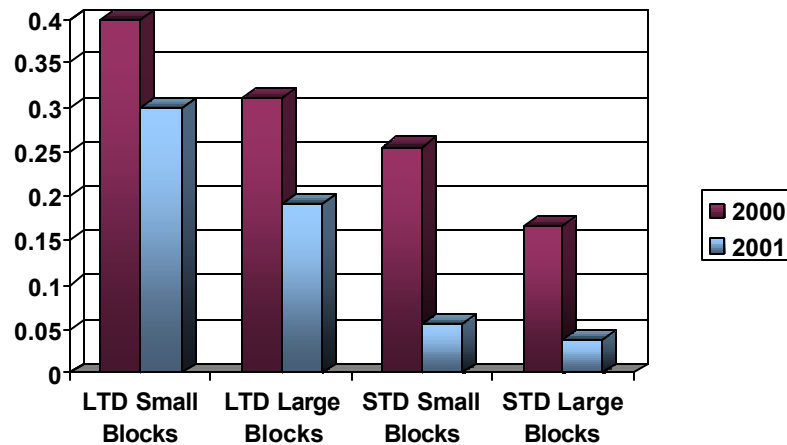
Immediately after that was completed, they started another process in which they wanted to work a little more scientifically. This one in particular, which culminated in the 1994 report, ended up modeling all the different health lines of business, including disability. The disability models were all based on individual disability business and individual disability experience, so no actual specific group disability was addressed in that report or in that work.

In 1998, the NAIC asked the Academy to revise the factors for disability in general. That culminated in the 2001 report, which gathered data for individual and group disability separately. They modeled those differently and in fact, within group disability, long-term and short-term disability were modeled separately. The models themselves had been improved somewhat, both for individual and group disability, so that they better reflected the real activities of those different lines of business.

I mentioned that the NAIC had asked the Academy to take a look at this in 1998. For long-term care, I think that activity is still going on. The disability lines were included in the 2001 report. Essentially, the group started off to review everything that had been done until that time and then to try to understand how they wanted to reflect some differences. Again, probably the key difference for the disability companies was the recognition that individual and group were actually different and that the dynamics were different in those lines of business. The report was delivered in March. Generally, the individual factors remained the same. There was a small reduction in guaranteed renewable, but for group, there was a big reduction for LTD and a very substantial reduction for STD. The NAIC adopted that, I believe, at the June meeting, and they were effective at year-end 2001.

Figure 1 tries to give you a rough idea. This is based on the information that was submitted by companies. It tried to compare essentially what the overall C-2 risk-based capital requirement would be as a percentage of premium. You can see there's a fairly significant reduction in all the different blocks and lines of business.

Figure 1  
**Aggregate C-2 Model Results**  
 (Percent of Premium)



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Unum Provident, in particular, has been very proactive in working with other rating agencies. Once the report was adopted, we spent time on the phone with several rating agencies that rated Unum Provident, and we helped present the data. We sent copies of the report to the different rating agencies, and we walked them through our view of what had occurred. For us the real issue was that in the past, they had relied on the NAIC and the Academy's work, and that work had never specifically addressed group disability. Our feeling was that it was logical that, now that they had the data available to them, they would reflect that information.

We spent a fair amount of time with Standard & Poor's (S&P). We know that they did a lot of analysis and, as you can see in Figure 2, their factors are reduced pretty significantly.

Figure 2

**Other Rating Agency Actions**

- Prior to 2001, no industry group disability data available
- 2001 Report provides specific group disability data and analysis
- Standard & Poor's lowered LTD and STD factors
- AM Best lowered LTD and STD factors
- Moody's has not taken any action to date

Required Capital Percent of Premium Factors								
Rating Agency	Group Long Term Disability				Group Short Term Disability			
	Original Formula		Revised Formula		Original Formula		Revised Formula	
	1st \$50 mil	excess	1st \$50 mil	excess	1st \$50 mil	excess	1st \$50 mil	excess
NAIC	25%	15%	15%	3%	25%	15%	5%	3%
S&P	25%	15%	18%	4%	25%	15%	6%	4%
AM Best	25%	15%	25%	9%	25%	15%	25%	9%
Moody's	10%	10%	10%	10%	10%	10%	10%	10%

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We didn't feel that AM Best spent a tremendous amount of time in reviewing it. I think they ran out of time toward the end of last year. They did make what I would consider a token reduction in their factors. We have spoken with them. They're reviewing those again this year in more detail. As I understand it, they have now proposed changes to their factors. I can't say that I know what those will be, but I suspect that they would better reflect the dynamics of group disability. We spent a lot of time with Moody's. They seemed to understand all the issues. They seemed not to have any problem with the fact that group disability should be less, and then they just ignored all the data. We haven't given up. We're still talking to them.

Chuck helped put Figure 3 together. This is all based on JHA's disability profit survey. The margin, as you can see, is pretty anemic now. It's around 6 percent for the industry. That's not much more than interest on capital and surplus. If you were to reflect the new factors, you would see that your C-2 would actually reduce about 34 percent, on average. The GAAP equity reduction looks like it would be about 22 percent, and that should result in the neighborhood of 7.5 to 8 percent return on equity, which isn't strong by anybody's standards. As Chuck had mentioned, it will be interesting to see how people respond to this.

Figure 3

### Implications of Revised Capital Requirements

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- Enhanced capital ratios from most major rating agencies
  - will ratings reflect improved ratios?
- Lower capital requirements for new and existing business give some relief to a low industry ROE
  - 2002 Industry ROE (actual): 6.1%
  - 2002 Industry ROE (restated): 7.5% - 8.0%
  - 2002 Industry C2 Reduction: -34%
  - 2002 Industry Equity Reduction: -22%

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**FROM THE FLOOR:** Given that this is an open forum, I'd like to have a couple of minutes of discussion as to exactly how you use these in terms of setting prices or setting targets at your company. If other people want to volunteer how they use or think they will use these reduced C-2 levels in their work, I would like to have a discussion about that.

**MR. POLLARD:** Unum Provident has an internal formula that we use to allocate capital to the various lines of business. That is based on a review of all the different rating agencies' formulas. We revised that this year, and it was quite a challenge because the NAIC and S&P made fairly substantial changes. AM Best made a token change on the group side. They actually increased the individual side, so that it absolutely offset any gain that Unum Provident could have received out of this. They weren't coy in saying that they weren't thinking about that when they made the changes. Of course, Moody's didn't change at all.

We didn't want to change overall the amount of capital we might hold for a line of business and have that change maybe impact some of our ratings. So internally, we have revised our formula. We took a different approach than we had in the past, when we tended to target something versus the S&P formula. We took a different approach this time because we realized that was not going to produce all the different ratios that we wanted.

As for pricing, I don't think it was our intention to try to reflect this. As you can see, for the industry in general—I'm sure that most companies would all talk about the

same thing—our return on equity has not been sterling. We would like to see that increase, not go down. From our perspective, we don't see that reflected in pricing, not at this point, anyway.

**FROM THE FLOOR:** What is the target? What's a reasonable target ROE for this line? Say 6.1 is not satisfactory. Chuck and you mentioned that interest on equity surplus makes up most of that 6.1, so the product is producing 1-1.5 percent ROE. The rest of the earnings are just from the company's surplus. What is a reasonable number?

**MR. POLLARD:** I don't think 15 is an unrealistic target. There's a target, and then there's what you'll actually get. We would shoot for 15 percent, knowing that we're not actually there. In fact, some of the dynamics that you have to deal with, certainly on a GAAP basis, are that a lot of your equity is assigned to the claim reserves that you have on the books today. Will your new business pricing actually be able to generate a 15 percent on equity when you're thinking about some of those older businesses?

I can't imagine that you could find an easy pattern to provision for both deviations that were just released in such a way that you would get 15 percent every year. But if you tried to look at that and have it emerge along those lines, I guess you could get there. I think part of the 6.1 is, indeed, the fact that we have a lot of capital assigned to the claim reserves, where there's probably not much in the way of release of provisions for adverse deviations occurring.

But again, I think 15 percent is realistic if you look at what people normally are looking for on lines of business. In fact, I did a session yesterday on individual disability, and Eric Berg from Lehman Brothers was there. For those who were there, they probably would agree that he doesn't have this great love relationship with disability. He sees it as a relatively volatile business, and he doesn't understand it very well. It would be easy to take issue with a lot of his statements, but at the same time, it's generally true that disability does tend to be somewhat volatile. When that's the case, you expect a higher return.

**FROM THE FLOOR:** So, Chuck, when you calculated those ROEs on the following page, was that based on those equity numbers, or is that a higher target? I assume companies have different target equity levels.

**MR. MEINTEL:** The calculations are based on results of the profit study. People who participate in that study give us their statutory surplus, and they give us their GAAP equity. Probably 75 percent of the people do that. For the people who don't give us those numbers, we then use the C-2 formula and ratio them up, based on the 75 percent who gave us those numbers. The facts from the profit study are that your statutory surplus is about 165 percent of your C-2 component of your RBC. By the way, remember there's also a C-1 component, based on assets, and

we don't get into that. We do everything off the C-2, which is the 50 percent of the first 25 million and then 15 percent of the excess, plus 5 percent of your reserves.

Then the GAAP equity is another 160 percent of your stat surplus. If you draw the picture, if you have C-2 here, according to this formula, then 165 percent of that is your stat surplus, and then another 160 percent of that is your GAAP equity, the difference between GAAP equity and stat surplus being your GAAP adjustments—your deferred acquisition cost (DAC), your deferred income tax and your difference between your stat and GAAP reserves.

**MR. POLLARD:** To quantify some things for you, one of the things the committee asked when it recommended the new factors was, for those companies submitting data, what would be the overall change in the C-2 RBC? Again, that's 100 percent of the company action level. The committee saw a reduction overall for the industry of about \$400 million. If everyone is targeting 200 percent, then that would actually release \$800 million of internally targeted capital.

**FROM THE FLOOR:** Based on what Chuck and Richard said, your equity number in Figure 3 was based on each company's actual equity level, rather than adjusting it all to a common NAIC level.

**MR. POLLARD:** That's correct.

**FROM THE FLOOR:** So companies are using different equity levels.

**MR. POLLARD:** That's correct.

**MR. MEINTEL:** Any other questions? Richard, thank you very much.

**MR. COHEN:** I'd like to give you a broad overview of some of the items that a company might want to consider in its evaluation of LTD risk management in a post-9/11 environment. I'll start by talking about what risk management was like pre-9/11.

In preparation for this session, I went back and read a June 1996 *Record* session entitled "General Risk Management for Disability." That session focused on reinsurance, with traditional excess risk reinsurance, for a large amount of claims and long-duration claims. How to get stop loss was mentioned, but acknowledged as very rare. Most of the focus on risk management was on risk selection. Risk selection dealt with geographic issues, back when California was the big issue, and that's how we got poorer-performing industries and loading those. Also, there were discussions of risk selection and talk of cutting back on long-term claim exposure and introducing subjective symptom limitations, having limitations on those benefits and finally, some contract provisions to enable disability risk management, such as mandatory rehab. The theme of that whole session was dealing with the mean of



the claims distribution—your expected claims—and trying to reduce that. There really wasn't a discussion of dealing with the tail of the claim distribution.

In the post-9/11 environment, we have to be much more concerned about this tail of the claim distribution and capital adequacy. We spend a lot more time examining potential losses from single events. Also, we can't take automatic comfort in the RBC levels that we just went over. There are questions as to their adequacy. The concentration of risk is quickly becoming the focal point of risk management. Concentration of risk could be geographic in nature, such as urban versus rural, or proximity to landmarks, high-rise buildings, or nuclear power plants. These are emerging issues. Exposures to large case sizes could create single-event exposure. Admittedly, if it's a worksite event, we could take some comfort in Workers' Comp offset.

Pricing is a question mark because I don't see risk management dealing with the tail. It's a pricing issue because most of the pricing exercises deal with the mean of the claim distribution, not the tail. It's also worth noting that risk management has very little contract opportunity because of state requirements and state regulations.

The major source of all the concerns is the great unknown—what the next catastrophic event might be like. We shouldn't take comfort in the fact that 9/11, in and of itself, wasn't a major disability event, because we don't know what will happen next. The natural catastrophe model that has been developed for the property and casualty (P&C) business is of limited help regarding the terrorism risk. However, I have read about some developments, and companies are starting to develop models for terrorism using things like game theory and trying to model human behavior or natural behavior.

Another item of concern is that it takes many years for claims of disability to emerge, such as cancer from a nuclear event. In addition, just the catastrophic event itself could have an economic impact, which, as we all know, has an indirect impact on disability claims. Also, as opposed to group life, where at least there is some discussion in Congress relative to a federal backstop, there's no such discussion for disability. At this point, there's no hope for a federal backstop for disability. It doesn't take much to create some serious losses, particularly for smaller or midsize companies.

Now I'm going to walk through some of the reinsurance options that a company may consider to manage this claim tail. We have traditional catastrophic coverage, aggregate stop loss, carrier pools, purchasing cooperatives, carve out/quota share, and financial reinsurance.

Traditional catastrophic coverage is the coverage we're all familiar with, which covers events involving multiple lives, and you pay up to a limit above the deductible. Disability within catastrophic coverage would usually be combined with life and accident. Very seldom would it stand on its own under traditional

catastrophic coverage. There have been a lot of well-publicized changes in this market in terms of exclusions and prices. Deductibles used to be around \$500,000; now, at the very least, you're looking at a deductible probably in the \$5 million range, per event. Many of you exclude terrorism altogether; at the very least, it's a very difficult coverage for nuclear, chemical or biological events (NCB).

In terms of price, you used to be able to get millions of dollars of coverage for hundreds of thousands of dollars. Now you're dealing with some sticker shock. Rate on line (ROL), which is often used to measure this, can be thought of as the reciprocal of the payback period. It might not be unusual to see a 20 percent ROL, particularly if you try to get that coverage including NCB. I know that a 5 or 10 percent ROL is very typical for coverage excluding NCB.

Let's talk about aggregate stop loss. Again, disability would often be combined with life and accident, but theoretically, it could stand on its own. The major advantage of aggregate stop loss is that it does cover all perils, so you do have NCB coverage. What's the downside? Typically we see pretty high attachment points in the marketplace—135 percent to 145 percent of expected losses. You have some internal limits, aggregate limits, in the \$50 million to \$100 million range. We're beginning to see some per-event limits, such as \$20 million. That's obviously troublesome because that's part of the risk that we're trying to cover, so these internal limits can be problematic. Pricing is highly dependent on the nature of your book and your experience, your spread of risk within the book. Probably the biggest issue is that this coverage is not widely available, but it is out there.

Under the pool concept, carriers agree to pay into a reimbursement pool based on an agreed-upon formula in the event of a defined loss. There is an existing pool for group life and accident called the special risk administrator's pool (SRAP). There's no pool currently operational for disability. The big plus of this is reduced upfront cost. You only pay significant dollars in the case of a catastrophic event, and even then, that is capped. One reason it hasn't developed yet is that participants generally have been uncomfortable with the formulas. Also, there's a philosophical discomfort in some companies in paying the claims of competitors, which will happen under this type of arrangement. Manny and Chuck will talk more in-depth about the pool concept.

Next, I want to talk about the purchasing cooperative concept. Many feel the current level of reinsurance costs are driven by capacity charges. So the idea is to get a group of carriers together in a pool of lower-level risk and reinsure an excess layer. To the extent their risk overlaps, they can buy, for example, a \$100 million combined maximum to lower their reinsurance costs, rather than each one buying a \$100 million maximum separately. Again, the key is that the risks don't overlap because if they overlap, \$100 million might not be adequate in total. Again, this is a concept for which some have expressed interest. I'm not aware of any cooperative arrangements right now, but if anybody in the audience knows of one, I'd be interested in hearing about it.

Let's talk about risk carve out. Under this concept, you pull out a portion of your risk that you believe to be the riskiest segment of the business. For disability, a geographic carve out or a case-size carve out might be two typical approaches. The arrangements are usually quota share, but they could be excess in nature or on an automatic treaty basis, again, depending on the definition of what you're carving out. The objective is to identify and protect the segments of the business that you believe to be the riskiest and reduce your overall total reinsurance premium. The questions are: Can you really identify a risky segment in the business, and how do you feel about the business you left unprotected?

The objective of financial reinsurance, also known as smoothing cover, is to mitigate the earnings and surplus impact in the year of the event. The offers are spread over an extended period, typically 10 years, and it's usually designed with a secondary layer that provides true risk transfer. You're being charged for the surplus, but again, this is not a high-cost option. There's no true risk transfer here. You're just smoothing—spreading out the losses.

Given all these options and its current situation, what should a company do? The first thing is to understand the nature of your exposure and where your risks are. For example, you might want to consider the overlaying distribution of your business with the proximity to nuclear power plants. The key to this type of analysis is to gather much more data than we typically do in current quoting processes. The information that we typically get with our sales/administration process doesn't provide the geographic detail to do this type of analysis, and there might be a need for a change within the industry to really get a handle on our exposure.

You have to decide within your company your loss tolerance. Again, this used to be easy with cheap catastrophic coverage. You just went out and spent a little bit of money to have protection. Now, you have to have a strong internal discussion of what your loss tolerance is—how much of a hit you are willing to take. This can be gut wrenching, but you have to have that discussion.

You have to sit down with management and give a realistic expectation in terms of your pricing power. If you go out and purchase this reinsurance, should you just automatically assume you're going to be able to pass this along, given the current competitive environment? The cost of the insurance could flow through to the bottom line. You might want to consider setting certain limits for certain segments or classes of business. How much could you take in without reinsurance? Again, in managing this overall exposure, that's something you have to take into consideration. You have to understand what you're trying to accomplish with reinsurance or whatever option you're using to provide protection. Is it short-term earnings impact you're trying to protect against, or is it capital adequacy, surplus management? You have to take into account what you're currently doing. The type

of excess risk or reinsurance that you currently have in place should meld together with any type of catastrophic program that you're considering.

You have all of these options in front of you. You have to measure their costs against the benefits that you see. Again, the cost structure that we went over can be very different. There are options with very low initial costs, such as the pool concept, relative to true risk transfer, but you can wind up paying at different ends. It's not directly comparable; there's a lot of judgment here. As actuaries, we would love it if there were a machine we could feed all this data into and an objective answer would pop out. A lot of this is going to come down to the attitude of your board and CEO in terms of risk tolerance and how they want to manage the risk. There's a huge element of judgment in risk management.

Finally, you need to stay on top of things because this market is constantly changing. There are new ideas coming out and new approaches to managing the risk. Risk management is no longer an annual exercise in which we just go out and purchase reinsurance. You now have to stay on top of this continuously.

In conclusion, companies now have to look at risk management from a totally different perspective. It's no longer sufficient to manage the mean of the claims distribution; you must spend a lot of time managing the tail of the claim distribution. However uncertain the risk is, we must get a handle on it. We must take steps to gather that exposure data to understand where our risk lies. These issues are not new; the events of 9/11 and the changes in the reinsurance market have just highlighted them.

There are no easy pricing solutions, contract solutions, or product design solutions to this. There are a lot of reinsurance options to explore, but don't expect a silver bullet. The best things you can do as a company are to implement risk management tools that make sense relative to your exposure and your management objectives, identify the risks that you can't afford to take and take the necessary steps to reduce them.

I'm going to turn it back to Chuck.

**MR. MEINTEL:** I'm going to introduce the pool concept, and then Manny will talk about the actual modeling and analysis his company did to decide whether or not it wanted to be in this particular pool.

Every year, JHA holds a seminar in Florida called "The Dynamics of Disability." At that meeting last year, we got together 20 or 25 different companies and approached them with the idea of developing a catastrophic pool. The results of that meeting were unanimous. Everybody wanted a pool, but clearly, the devil was in the details. We spent the next nine months trying to develop the details of that pool. I will provide a quick overview of those details so that when Manny goes through his work, you'll see how it all fits together with this one particular type of

risk management tool. The theme of the meeting, obviously, is that you need to do this type of analysis, or something similar, of all the different options to evaluate the right approach for your company.

We thought the criteria needed to be ease of understanding and administration. For disability, that poses significant problems because disability is not like group life, for which a lot of numbers you could base ease on are right in the annual statement. Everybody knows that disability is lumped in somewhere in that blue book.

We determined that the risk to the industry for disability is relatively small. That's not to say we took a myopic view and said, "Well, 9/11 was a death event and therefore really wasn't disability. People don't have to worry about it." If you look at what happened in Russia earlier this week, I think 100 or 150 people are still in the hospital as a result of that. Clearly, some events could be disability events and not necessarily death events, although that event happened to be a little bit of both.

We wanted to design a pool that protected a balance sheet hit. We wanted to make it catastrophic enough so that you really were protecting a company's balance sheet. We weren't looking to smooth any earnings in the current year to the respective company or companies that happened to have the misfortune of the event happening to them. I think Warren touched on this—there isn't any help from the government likely very soon for disability. As Warren also mentioned, reinsurance markets aren't out there, at least that we know of, to help with this. We are trying to lobby with our parent company as to the benefits of this market, but so far, we are still in those discussions.

Then finally, we wanted the pool to be governed by the participants. We were going to develop a board—call it a board of governors, for lack of a better term—that would be made up of member companies, and they would manage the pool.

We had a first-pass design that we modeled very closely to the SRAP pool that Warren mentioned. The big point of that SRAP pool was to specify something over which it would be easy to allocate the losses, and we picked earned premium. But the overwhelming feedback from pass one was that pure market share was not an indication of how people really felt about the true risk inherent in some catastrophic event.

So we redesigned the pool. In pass two, as you'll see in a second, we had a formula that was based in part on case distribution. For example, imagine a company with \$100 million of premium that was made up of all small cases versus a company with \$100 million of premium made up of all large cases. Given the nature of a catastrophic event likely happening in the workplace setting, the company that was made up of the large cases, in pass two, would have a higher percentage of losses that they would absorb, as well as give away, than an equivalent company, from the premium perspective.

As for the status of our efforts, we're now probably running about six to one against participation, not because of the concept, but because of what Warren alluded to earlier about companies and their willingness to absorb risk from their competitors. The design of the pool considered workplace risk and population risk. The workplace risk is a function of your case size. Think about the dynamics and how difficult it is even at your company to get your distribution by case size of your business, and all the different ways you could measure case size, whether by premium or lives. There are many things we could talk about on how to measure that. Suffice it to say that in any kind of disability pool, it's difficult to get data to make these calculations and to get auditable data and so on from companies.

We also felt there was a population risk, which was purely a function of market share. Unum Provident, it's safe to say, is probably the largest market share, and so from that component of risk, it would tend to pick up the biggest share. We had a lot of discussion at our company on how to weight these two risk factors. Given the nature of terrorism events—terrorists want high publicity and large amounts of casualties—we felt that the workplace event was the majority of the risk. That was basically the feedback after the first pass of the design as well. That's why we give those two risks an 80/20 weight.

Let me explain how the pool works as if we're using market share. But conceptually, it works the same with both risks. You just line up the companies, one through 43, and you have their premium and their distribution. Unum might be 28 percent or 29 percent market share. You determine those percentage shares. If a loss occurs to a company other than Unum, after the deductibles and the event trigger, that loss would be spread according to that distribution throughout the industry. If the loss occurred to CUNA Mutual up in Wisconsin and the loss was large enough to satisfy the event trigger and cover the various deductibles we had, then that loss would go into this pool and would be spread according to this market share. That's basically how the pool works.

Again, for ease of understanding, I only used the market share component. The case size component works in a similar manner; it's just an allocation based on our assessment of what your case size distribution is, relative to everybody else.

The feedback we received as we were putting this together as to why people weren't interested was somewhat depressing. The one that just gnaws at me was that no one was disabled in the World Trade Center. I think that's a very myopic way to analyze the risk that we all face today. We've always faced the risk, as Warren said, but certainly today, it is much heightened.

A second criticism was that a company did not want to take XYZ's claims on underwriting mistakes. Again, we tried to design the pool so that it was in the deductible and such that it applied to major events, so it truly was catastrophic. In the sense of small underwriting, I don't think that really applies. But in the sense of

big underwriting, when a company is based, for example, in Wisconsin and its business is very local, does it really want to take risk from all these players that may be in large metropolitan areas, have huge single-employer exposures, and things like that? I think in this statement that they're really talking about underwriting in a bigger sense than individual case underwriting.

Basically, it came down to the fact that most people felt they were more likely to get claims from the pool than they were to benefit from the pool. I think Manny is going to go through the analysis they did to show a little different viewpoint, but that's the feedback the companies gave us.

Then a few people said, even after pass two, that they didn't agree with the risk-share formulas. I think it was not so much the concept of case size and market share, but more from the perspective of how can you monitor it? These aren't public numbers, so you have to take companies' word for them. Quite frankly, there's a lot of distrust from carrier to carrier out there.

The bottom line for this particular pool concept was that people were not willing to take risk. They wanted a true risk transfer. They didn't want to absorb the risk that they might get other people's claims when they had no control in managing that risk. They wanted reinsurance. They wanted to know what the fixed cost was and pass off the risk.

By way of introduction, Manny will talk about the modeling they did. Warren said it very well. You have to start managing more than just the mean. You have to look at both the variance and the tail of our current disability loss distribution.

**MR. MANUEL V. HIDALGO:** Thank you, Chuck. When we first heard about the capacity pool that JHA was proposing, we were very skeptical. We did not want to share risks with other companies whose underwriting practices we were not familiar with. The nature of our business is more in suburban areas with much smaller case sizes, so we weren't that excited when we first saw the details.

When we got pass two, we spent a lot of time analyzing it. We had a group of product team members come together. Forty companies were invited to join the pool. The membership fee was \$10,000 per year. The event trigger varies by company, not just the deductible, which is the number of lives over which the pool will reimburse the company. Also, there's a maximum payout in total if there is an event of \$1 billion. There is also a maximum exposure or maximum payout that each individual company will pay, and that's set by the company.

The question we wanted to answer was, how would GE Financial fare in this pool structure? We decided right away that we needed to do stochastic modeling. A deterministic model would not work. We needed to have a model that incorporated all the exposures of each company in the pool. Obviously, we didn't know how

many companies would participate, so we just said, "What if all 40 companies participated? We can easily modify that." We'll talk about that a little bit.

One decision we needed to make was, what type of claim distribution should we make? We looked at three possible ones: the exponential, the Weibull, and the half-normal, which is just the right side of the normal curve. We said the likely candidates should be no negative claims, and the likelihood decreases as the number of lives have a claim. We tested those three and determined that the results for each one didn't differ markedly. We just picked the one that we thought probably was the most reasonable, which is the exponential one.

We said that the exponential distribution will simulate the number of lives above the deductible. For example, our deductible in the pool proposal was 10 lives. We modeled the number of claims beyond the 10 lives because that's the number of lives for which we would be reimbursed. For another company, that we'll call "ABC", an example is 150 lives. That's how we modeled the pool.

Figure 4 shows there are obviously different ways of shaping the curve. We modeled two types, which we thought was conservative. Of the short-tail and the long-tail ones, we said the short tail was essentially two times the deductible beyond the deductible. For example, in our case, the maximum of the short tail was 20 lives and 50 lives respectively.



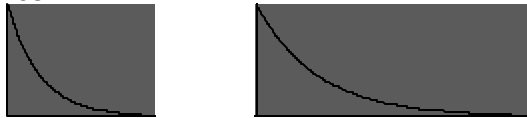
Figure 4

***LTD Cat Risk Pool***

***Modeling Assumptions***

✓Distribution tested at with increasing standard deviations to test the lever effect of increasing magnitudes of claims.

✓With true risk unknown, both long-tail and short tail results were analyzed to understand robust-ness of model & range of outcomes



✓Model runs simulate different combinations of each business exposure across its claim distribution

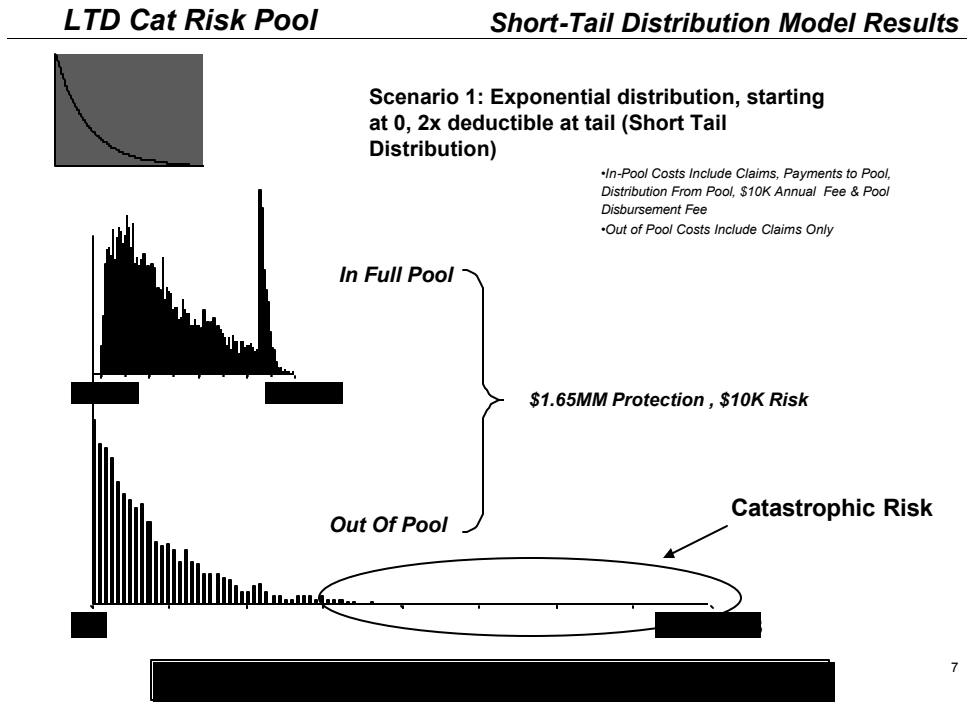
✓Out-of-Pocket Impact Both In and Out of Pool can be analyzed for any business desired.



6

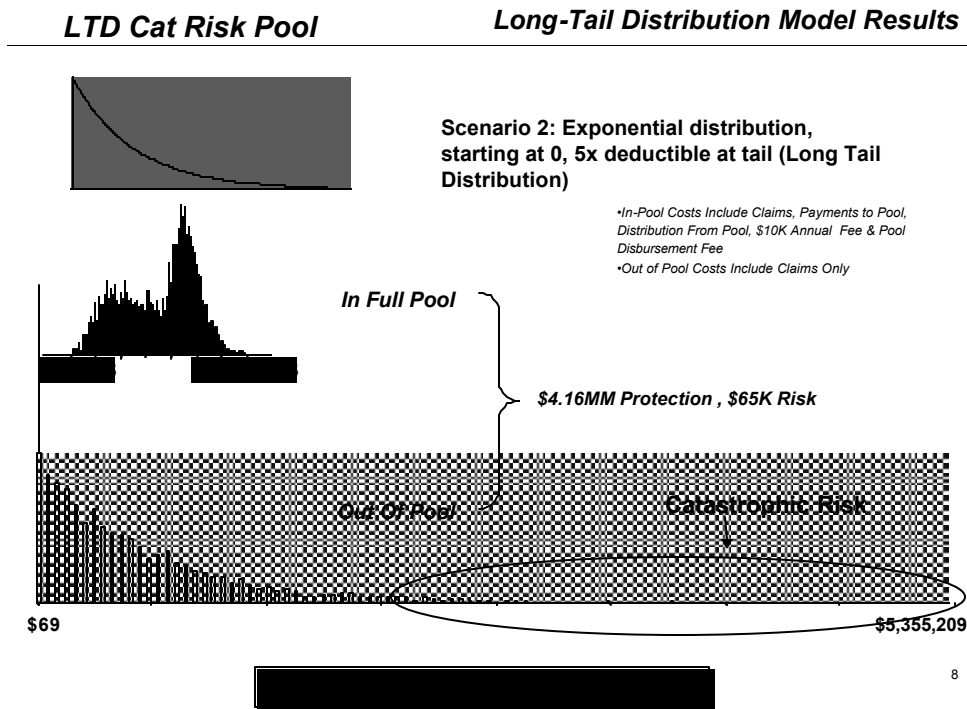
These are the results for the short-tail distribution, and again, this is the payout for our own company in Figure 5. It shows that for this assumption, the two times deductible tail, if we were in the pool, we would have a minimum cost of \$10,000 because of the annual fee. The maximum would be \$674,000, according to the results of this particular model. If we were out of the pool, while the likelihood of this is much smaller in the tail, the maximum exposure would be \$2.3 million. So the take-away here is that it's a smaller downside risk for that coverage.

Figure 5



But the results are even more dramatic when we assume the longer-tail distribution, which is the five times (Figure 6). If we were in the pool, our losses would have been capped at \$1.2 million, and if we were out of the pool, we would have been exposed up to \$5.4 million. That concludes my presentation.

Figure 6



**FROM THE FLOOR:** Manny, what did you end up doing?

**MR. HIDALGO:** We told Chuck that we were interested.

**FROM THE FLOOR:** You ended up voting for it.

**MR. HIDALGO:** We were voting for it.

**FROM THE FLOOR:** How did you look at it? Did you look at it almost like a "rate on line" type of approach, what your premium would be versus your losses? We voted for it for a different reason.

**MR. HIDALGO:** We voted for it precisely because of the analysis that we showed and we shared it with everyone. Actually, I'm curious, you said you voted for it for a different reason?

**FROM THE FLOOR:** We're a very small line within a large property-casualty company, and we would never want our line to bring our company to its knees, being an ancillary-line business. We looked at this as a balance sheet issue, not a profit and loss (P&L) issue. It wasn't worth it from our management's point of view to take that kind of level of surplus risk, given where we sit within the organization.

**MR. HIDALGO:** I would say it would be a similar reason for us. Actually, I should have said at the beginning that our lawyers wanted to make sure that I say this. I would encourage you to do your own analysis. Do not base your conclusion just on this analysis today.

**MR. MEINTEL:** As I said before, of the 40 companies we talked to, they're probably running five or six to one against the pool concept. I invite anybody from one of those companies to come up and talk about your company's reasoning and if you have done something else to try to solve this particular problem.

**FROM THE FLOOR:** One way of viewing what you just said is that you have eight or nine companies that are interested in doing this. Is there any chance you're going to go forward? What would it take?

**MR. MEINTEL:** We're in the process of getting the companies that are interested to see some of the other solutions that Warren talked about. We're also, as I mentioned before, trying to find a market, find an outlet or capacity for this risk. Unfortunately, those things in today's environment go very slowly, but we are continuing to work on it.

**FROM THE FLOOR:** I was wondering why you didn't consider geographic concentration of business. For instance, with bioterrorism, it wouldn't make a difference whether you had one large plant or, if you were in a large metropolitan area, whether you had a lot of small groups.

**MR. MEINTEL:** We looked at five or six different things, geography being one of them. We were constantly fighting between simplicity and exactness. We decided that case size distribution, because most people can measure that, and market share, because most people can measure that, are the two easiest, most visible things on which to base the allocation of the losses.

Even after getting people to volunteer their distributions, whether by standard industrial classification (SIC) code or geography or anything along those lines, it is very difficult to make it auditable. Those are the kinds of things that shaped how we structured the pool. It was a compromise between simplicity and complexity.

**FROM THE FLOOR:** A couple of practical considerations occur to me, probably on the backside of an event happening. I wonder if you've considered arbitration of the disputes and how those would be resolved. Also, was there any consideration of a participant choosing down the road to secede from the union, as it were? How would that be handled?

**MR. MEINTEL:** On the first question relative to arbitration, we had the whole concept of a board of directors, if you will. Also, with respect to claims, we clearly saw an arbitration process to the extent that there were disputes as to what was and wasn't a poolable event.

When we approached people, we definitely talked about this being an iterative process. In the modeling we did with 40 companies, we kept telling people that if they made a commitment, that commitment was contingent on the ultimate number of companies involved and the makeup of those companies. We definitely saw an iterative process before we got to the final pool, and then that concept would also carry over to renewal. The next year, people would have to remake the decision to be in the pool. To the extent somebody would drop out or somebody would come in, that would set up a second iteration to get the final pool participation for that particular year.

**FROM THE FLOOR:** I was wondering if you could talk a little bit about how you would identify a specific claim. Is there a time period with benefit waiting periods? There's a high mortality risk associated with it, so there might not be a real high dollar amount, which I think is what you're really trying to protect.

**MR. MEINTEL:** We talked about claim management—identifying which claims would go in the pool. Clearly, the claim had to be an approved claim by the respective company. The deductibles were high enough that it wouldn't just be a matter of one or two claims. I think the smallest claim trigger was 10 and the largest was 150.

We also had rules, such as the claim had to occur within, I think it was 60 days, although we might have said 90 days, of the catastrophic event. I can't remember what the final number was. We did not want the pool to cover the person who three years from now suddenly doesn't want to go up in an elevator because of what happened in the World Trade Center. We definitely had a rule that the claim event had to occur within a specific time period. We started out with 60 days of the catastrophic event.

The nature of these questions points to the administrative difficulty of trying to put together a pool like this. You have to balance all that complexity, if you want to call it that, with the real need of transferring this risk and sharing this risk as an industry. The modeling we did showed that the industry as a whole could handle even the direst events. But if those events happened to any one company, that would clearly bankrupt that particular company, and that's what we're trying to solve.

**FROM THE FLOOR:** In the case of disability, when you start thinking about chemical attacks., how do you define an event?

**MR. MEINTEL:** We focused on trying not to have to define and classify the event as a catastrophe, but more or less to let the amount of claim loss determine whether this was a poolable event. We weren't concerned with whether the losses were from a plane hitting a building, somebody poisoning the water supply in a particular town, a dirty bomb or whatever. If the losses that occurred from that

event were within that 60-day window, then we would consider that a poolable event, assuming that everybody's claim trigger and deductible were met and so on and so forth.

**FROM THE FLOOR:** Assume it's a dirty bomb situation, where essentially people are not disabled immediately—something triggers it in four, five or six months. A lot of policies have six-month waiting periods. How would you handle that?

**MR. MEINTEL:** The pool actually worked on paid claims, and the deductible was based on the actual paid claims made. So basically, the pool would start redistributing these claims between the companies. It wouldn't start until the deductible was met, but then they would start redistributing the cash.

Even after the point that cash starts changing hands, there are still liabilities that have to be recognized, and you would recognize everything on a reserve-type basis. But we didn't want to have the pool get into discussing whose reserve basis. Again, the example that somebody brought up earlier of a claimant who is disabled but is probably going to die in six or eight months or nine months—what reserve do you actually put on that particular claim? The structure of the pool was cash, so it eliminated a lot of those things.

Even if someone had a six-month waiting period, that person still would have stopped working within that 60-day window. From that perspective, if the claim would ultimately have been approved by the direct writing company, it still could be considered a poolable claim, assuming that company met its claim trigger and deductible.

**FROM THE FLOOR:** Have you talked to some reinsurers that have been involved with these types of coverage to -see if we can learn from their experience?

**MR. MEINTEL:** We have talked to other reinsurers. As I said, we're trying to develop this solution for the industry, but as of yet, we haven't found anybody who wants to take this risk. One company we did find assumed in its pricing that an event happens, and that makes the cost significantly higher than probably anybody would want to pay. It's still a developing market. The events of September 11, and now the events in Russia and everywhere in between, are certainly still in the news. People are thinking about it, but they're certainly proceeding cautiously.

**FROM THE FLOOR:** The whole idea of thinking of this pool concept is healthy for us. Have you thought about on the claims side, though—because that's where I have a little bit of a problem—of using a third-party administrator to handle the claims in the event you have one, so that it's not one company's claim shop versus another?

**MR. MEINTEL:** Yes. The original pool concept proposed that JHA would manage those claims. JHA is a licensed TPA in all 50 states, so to that extent, we have the resources and the facility.

Keep in mind that the first trigger, to be a poolable event, was that the claim had to be approved by the direct writing company. Just because the claim was approved by the direct writing company didn't make it a poolable claim. That process would have been done by a third-party administrator. Whether the board in charge of the pool would have named JHA the TPA or somebody else, we never got that far. But that's how we expected to handle that. It's important to understand that the direct writer was only the first trigger point for that to be a poolable claim.